Remarks:

This amendment is submitted in an earnest effort to advance this case to issue without delay.

The claims have been replaced with a new set of claims aimed at the use of the material according to the invention to protect a heat-stressed component (Substitute Specification, page 3, line 18). Furthermore a method claim has been inserted that specifically describes a method of protecting a thermally stressed component by applying to it a layer of the material according to the invention. Both these claims are of the same exact scope and use the exact same words, so division between them, especially under the somewhat broader PCT rules, is not appropriate.

It is admitted that the composition according to the invention generally corresponds to that of US 4,752,594 of Hyuga, which in fact was supplied by the applicant with the original application papers.

Nonetheless nothing in Hyuga suggests using this material as heat-insulating material for protecting a thermally stressed component, as for example a turbine blade. It is a big leap to say that since a material is a good electrical insulator, it is also a good thermal insulator; in fact this is not always the case since many fairly dense materials with excellent dielectric properties

are also excellent conductors of heat. It would be just as logical to say that a good electrical insulator would make good sound insulation, a clearly absurd idea.

In fact the best art is US 6,319,614 of Beele because it actually deals with the same problem as this invention, namely a heat-insulating layer to protect a thermally stressed component. However. Beele instead proposes, in addition to the known stabilized YSZ material, complex oxides that are formed either of ternary or pseudoternary oxides with a pyrochlor structure (column 2, last paragraph, or ternary or pseudoternary oxides with a perovskite structure of the general formula ABO_3 where A is CA or Y and B is HF or Zr. The limitation of the perovskites with respect to pyrochlors does not give any hint that the material is a good heat insulator. There is not a single suggestion in Beele to use different perovskite materials, such as those according to the instant invention, as thermal or heat insulation, not one. In other words Beele deals with the same problem, but uses a different substance.

Even combining Beele with Hyuga or with Campbell (2003/0103875) there is no suggestion that perovskite has any application other than a dielectric, or even as a superconductor. None of these references suggest the use of the instant invention.

For use as thermal insulation it is necessary for the material to have a high coefficient of thermal expansion on the

order of 8 x 10^{-6} K^{-1} and a reduced tendency to singer at a temperature below about 1400 °C (Substitute Specification, page 3, lines 24-26). These critical properties are not referenced in Campbell, Hyuga or Bhalla (literature), which is proof that the idea of thermal insulation is not even on the table in these references.

It is therefore clear that the use of the described perovskite material as a heat insulator is neither seen nor suggested in the art. The only suggestion to use this material as a thermal insulator must therefore have come from the instant application.

The claims are clearly allowable over the cited art. Notice to that effect is earnestly solicited.

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